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glenn.williams@goodwinprocter.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HARUHUSA TANIGUCHI, HIDEOMI SHISHIDO, SHIGEO
DOI, YOSHIHISA OKIMURA, and HANS-PETER NURNBERG

Appeal 2009-006473
Application 10/717,985
Technology Center 1700

Decided: March 31, 2010

Before MICHAEL P. COLAIANNI, JEFFREY T. SMITH, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-5, 8-23, and 25-31.¹ (App. Br. 2). We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

THE INVENTION

Appellants describe a method for manufacturing a multi-layer outer panel and a game ball. Claims 1, 2, 10, and 25, reproduced below, are representative of the subject matter on appeal.

1. A method of manufacturing a multi-layer outer panel for a game ball, the method comprising the steps of:
 - a. three-dimensionally forming a generally convex top layer comprising a first material and having an outer surface and an inner surface, the outer surface of the top layer dimensioned to substantially correspond to a section of a surface of the ball; and
 - b. three-dimensionally forming at least one generally convex backing layer comprising a second material and having an outer surface and an inner surface,
wherein the inner surface of the top layer is connected to the outer surface of the at least one backing layer, thereby forming the outer panel.
2. The method of claim 1, wherein step (b) is performed prior to step (a) and wherein, in step (a), the backing layer is used to three-dimensionally form the top layer.

¹ Claims 6 and 7 have been withdrawn from consideration and claims 24 and 32 are no longer pending. (Appeal Brief filed April 24, 2007 (hereinafter "App. Br."), at 2.)

10. The method of claim 1, wherein the outer panel has a predetermined radius of curvature substantially matching a radius of the game ball.

25. A method for manufacturing a game ball, the method comprising the steps of:

providing an air-impermeable bladder having a substantially spherical shape;

providing a plurality of multi-layer panels, each panel being formed in a generally convex shape prior to being interconnected with adjacent panels over the bladder and comprising:

a generally convex top layer comprising a first material and having an outer surface and an inner surface, the outer surface of the top layer dimensioned to substantially correspond to a section of a surface of the ball, and

at least one generally convex backing layer comprising a second material and having an outer surface and an inner surface, the outer surface of the at least one three-dimensional backing layer connected to the inner surface of the top layer; and

interconnecting the edges of the panels, thereby forming an outer layer of the ball surrounding the bladder.

THE REJECTIONS

The Examiner rejected the claims as follows:

1. claims 1, 9, 11, 12, 25, and 30 under 35 U.S.C. § 102(b) as being anticipated by JP 1-265979 A (published Oct. 24, 1989 (hereinafter “JP ‘979”));²

² All references to JP ‘979 are by way of the English translation of record provided by Appellants in the Evidence Appendix to the Appeal Brief, with

2. claims 1, 8, 9, 18, 19, 22, 23, 25, and 29-31³ under 35 U.S.C. § 102(b) as being anticipated by Ou (U.S. 6,206,795 (issued Mar. 27, 2001));
3. claims 2-4 under 35 U.S.C. § 103(a) as being unpatentable over Ou and further in view of Giesen (U.S. 5,624,517 (issued Apr. 29, 1997));
4. claims 13 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Ou further in view of Boutle (U.S. 4,157,424 (issued June 5, 1979)) and GB 1,095,969 (published Dec. 20, 1967 (hereinafter “GB ‘969”));
5. claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Ou as applied to claim 1;
6. claims 5, 10, 26, and 27 under 35 U.S.C. § 103(a) as being unpatentable over JP ‘979 as applied to claims 1 and 25; and
7. claims 13-17 under 35 U.S.C. § 103(a) as being unpatentable over JP ‘979 and further in view of Ou, Boutle, and GB ‘969.

In rejecting the claims, the Examiner stated:

[t]he claim does not require the top layer to be curved to correspond to the curvature of a section of the ball, but rather dimensional, i.e. of the same size. . . . It is noted that the claims do not require any order to the steps, such that the claims do not require the bottom layer and top layer to be convex prior to their connection with each other. Moreover the claims fail to define over a layer wherein one of the surfaces of a layer is convex while the other is not.

(Ans. 3-4.)

the exception of the Figures, which are reproduced from the Japanese publication.

³ In the Answer, the Examiner states that claim 25 provides no antecedent basis for the term “outer layer” in claim 29. (Examiner’s Answer entered April 24, 2007 (hereinafter “Ans.”), at 12.) However, we agree with Appellants that the term “outer layer” is expressly recited in claim 25. (Reply brief filed September 11, 2007 at 2.)

The Examiner found that JP '979 discloses a top layer having a convex curvature, and a bottom layer that also has a convex curvature because it is injection molded against the top layer. (Ans. 3.)

The Examiner found that Ou discloses convex panels as shown by the sectional views of Figures 7A-7D. (Ans. 6-7.) The Examiner found that Ou does not disclose forming the cover layer on a three-dimensional foam layer as required in claim 2. (Ans. 8.) Regarding claim 20, the Examiner determined that it would have been obvious to vulcanize the foam layer prior to bonding it to the cover layer so that the cover layer would not be subjected to the high temperatures necessary for vulcanization. (Ans. 9.) The Examiner found that Giesen discloses deep drawing a film to form it against a foam layer. (Ans. 8.) The Examiner concluded that it would have been obvious to form the cover layer of Ou as directed in Giesen to avoid the problems related to the uniform and homogenous application of adhesive. (Ans. 8.)

Appellants contend that JP '979 discloses flat cover panels, not generally convex panels as required in claims 1 and 25. (App. Br. 5-6.) Appellants argue that Ou is silent as to the curvature of the leaf-shaped panels, and that Ou's figures show the shape of the panels as assembled and not when formed. (App. Br. 6-8.) Regarding claim 20, Appellants argue that the Examiner has not relied on any references to support the rejection of the claim. (App. Br. 13-14.) Regarding claim 2, Appellants contend that there is no basis for combining the sanitary basins of Giesen with the basketball of Ou. (App. Br. 11-12.) Regarding claim 10, Appellants argue that JP '979 does not teach or suggest a panel wherein the radius of

curvature of the outer layer has a radius of curvature substantially matching a radius of a game ball. (App. Br. 15.)

ISSUES

Appellants' contentions present the following dispositive issues:

Did the Examiner err in finding that JP '979 discloses the method of forming a multi-layer outer panel for a game ball including three-dimensionally forming a generally convex top layer and generally convex backing layer as recited in claims 1 and 25?

Did the Examiner err in finding that Ou discloses the method of forming a multi-layer outer panel for a game ball including three-dimensionally forming a generally convex top layer and generally convex backing layer as recited in claims 1 and 25?

Did the Examiner err in concluding that it would have been obvious to combine Ou with Giesen to form Ou's top panel layers on a three dimensional foam layer as taught in Giesen?

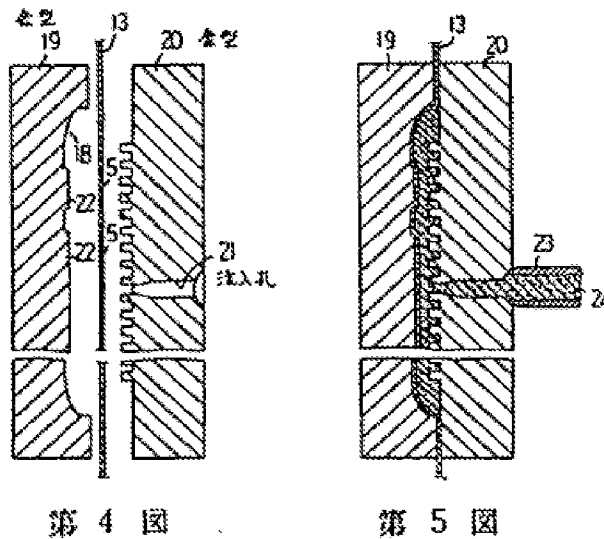
Did the Examiner err in concluding that the subject matter of claim 20 would have been obvious over Ou?

Did the Examiner err in concluding that the subject matter of claim 10 would have been obvious over JP '979?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Figures 4 and 5 of JP '979 are reproduced below:



Figures 4 and 5 depict the preparation of a surface panel using a pair of metal molds 19 and 20 with a cavity 18 and stamping foil 13.

2. JP '979 discloses that the protective layer 8 is attached to the surface of the panel main body 7 after the panel is molded. (JP '979, page 542, para. bridging col. 1 and 2.)
3. Ou's Figure 7A is reproduced below:

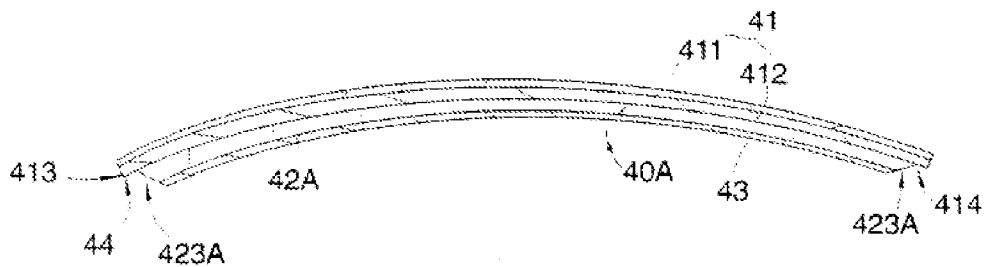


FIG 7A

Figure 7A depicts a “sectional view” of a cover panel 40A that includes a cushion layer 42A, a cover layer 41 composed of outer coating layer 411 and inner lining layer 412, lining cloth 43, a surrounding rim 414 on the bottom surface of the cover layer, covered side edges 413, and inclined side edges 423A. (Col. 2, ll. 55-56; col. 3, ll. 16-26; col. 4, ll. 20-21, 47-58.)

4. Ou discloses that the cushion layer is made of a foam material. (Col. 3, ll. 20-22.)
5. Ou discloses that the bladder carcass has a plurality of projection ribs that extend from the carcass and define eight leaf shape panel recesses surrounded by ribs. (Col. 3, ll. 3-6.)
6. Ou discloses that the sides of the cover panels are arranged to fully adhere to the edges of the ribs. (Col. 4, ll. 17-23.)
7. Giesen discloses deep-drawing a thermoplastic material to a formed foamed synthetic resin material in order to avoid the drawbacks of adhesive bonding. (Col. 1, ll. 30-40, 55-63.)

PRINCIPLES OF LAW

During examination, claims terms must be given their broadest reasonable construction consistent with the Specification. *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007). Although claims are interpreted in light of the specification, limitations from the Specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). “[A]s applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee.” *Icon Health & Fitness*, 496 F.3d at 1379.

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). The Supreme Court further explained, “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.” *Id.* at 417.

ANALYSIS

For grounds of rejection 1 and 2, Appellants argue claims 1 and 25. For ground of rejection 3, Appellants do not separately argue claims 2-4. For ground of rejection 5, Appellants do not present separate arguments for claims 20 and 21. For ground of rejection 6, Appellants only present arguments with respect to claim 10. Accordingly, we confine our discussion to claims 1, 2, 4, 10, 20, and 25, which contain claim limitations representative of the arguments made by Appellants pursuant to 37 C.F.R. § 41.37(c)(1)(vii).⁴ For grounds of rejection 4 and 7, Appellants essentially rely on the arguments presented for grounds of rejection 1 and 2. Therefore,

⁴ Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2009).

our comments regarding grounds of rejection 1 and 2 apply equally to grounds of rejection 4 and 7.

Ground of Rejection 1

We are unpersuaded by Appellants' argument that the panels of JP '979 are not "generally convex" as recited in independent claims 1 and 25. We agree with the Examiner, that the term "generally convex" as recited in the claims encompasses layers that include one convex surface. (*See* Ans. 3-4.) As shown in Figures 4 and 5 of JP '979, metal mold 19, used in forming the surface panel, includes a generally convex surface. (FF 1.) Moreover, since protective layer 8 is formed on top of panel main body 7, protective layer 8 would also be generally convex. (*See* FF 2.)

Appellants additionally argue that the panels of JP '979 will not "substantially correspond to a section of a surface of a ball" as required in claims 1 and 25. (App. Br. 5.) We agree with the Examiner that the claims do not require that the panels have the same curvature as the ball, but rather that the panels are of the same size as the corresponding surface portion of the ball. (Ans. 10.) Indeed, claim 10 recites the additional requirement that the radius of curvature of the outer panel has a predetermined radius of curvature substantially matching a radius of the game ball. Accordingly, Appellants' arguments are not persuasive.

Ground of Rejection 2

Regarding claim 1, we do not agree with Appellants' argument that Ou fails to disclose panels having a generally convex shape upon formation because Ou discloses the use of conventional cover panels and the drawings

as a whole depict sectional views of an assembled basketball. (App. Br. 7-8.) As the Examiner points out, Ou discloses that Figure 7A depicts a sectional view of the panels, not of the ball, and Appellants have provided no persuasive evidence that the panels are flat. (Ans. 11-12; FF 3.) In addition, Appellants' arguments that the panel edge peeling problem is only relevant for flat panels (App. Br. 9) is unsupported by any persuasive evidence. There is no indication that convex panels would be unsusceptible to delamination during formation of the ball or game play.

Claim 25 stands on different footing. Claim 25 requires "interconnecting the edges of the panels." We agree with Appellants that the Examiner's position that claim 25 does not require the panels to be contacting (Ans. 12) is in error. (App. Br. 9.) Ou discloses that the panels do not interconnect, but that the edges of the panels are adhered to ridges integrally formed in the bladder. (FF 5-6.) Accordingly, we reverse the Examiner's rejection of claims 25, and 29-31 as being anticipated by Ou.

Ground of Rejection 3

The Examiner determined that it would have been obvious to form the cover layer of Ou as directed in Giesen to avoid the problems related to the uniform and homogenous application of adhesive. Appellants do not address this rationale provided by the Examiner. Rather, Appellants only argue that there is no basis for combining the basins of Giesen with the basketball of Ou due to the softness of materials desired in Ou. (App. Br. 11-12.) We agree with the Examiner that Giesen's process is independent of the hardness of the foam and therefore one skilled in the art would have expected a predictable result in applying the technique of Giesen to the ball

of Ou. (Ans. 13; FF 4 and 7.) *See KSR, supra*. Accordingly, Appellants' arguments are not persuasive.

Ground of Rejection 5

Regarding claim 20, although Appellants contend that nothing in the cited art teaches all the limitations of claim 20, Appellants do not appear to dispute the Examiner's underlying findings that one of ordinary skill in the art would appreciate that vulcanizing the foam layer prior to bonding it to the cover layer would prevent the cover layer from being exposed to the high temperatures necessary for vulcanization. (App. Br. 13-14.) Therefore, we decline to find error on the part of the Examiner. *See In re Lundberg*, 244 F.2d 543, 551 (CCPA 1957) (Examiner's statement accepted as true when Appellants fail to question its accuracy or present contradicting evidence).

Ground of Rejection 6

Regarding claim 10, we are persuaded by Appellants' argument that JP '979 fails to teach or suggest a radius of curvature of an outer panel that substantially matches a radius of the game ball. (App. Br. 15.) The Examiner has not provided sufficient reasoning why it would have been obvious to form the convex panels of JP '979 to substantially match a radius of the game ball as required in claim 10. (*See* Ans. 4.) "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007), quoting *In re Kahn*, 441 F.3d

977, 988 (Fed. Cir. 2006). The Examiner also does not respond to Appellants' arguments regarding claim 10. (*See generally* Ans.)

Accordingly, we reverse the Examiner's rejection with respect to claim 10.

CONCLUSION

The Examiner did not err in finding that JP '979 discloses the method of forming a multi-layer outer panel for a game ball including three-dimensionally forming a generally convex top layer and generally convex backing layer as recited in claims 1 and 25.

The Examiner did not err in finding that Ou discloses the method of forming a multi-layer outer panel for a game ball including three-dimensionally forming a generally convex top layer and generally convex backing layer as recited in claim 1.

The Examiner did not err in concluding that it would have been obvious to combine Ou with Giesen to form Ou's top panel layers on a three dimensional foam layer as taught in Giesen.

The Examiner did not err in concluding that the subject matter of claim 20 would have been obvious over Ou.

The Examiner erred in finding that Ou discloses the method of forming the game ball as recited in claims 25 and 29-31.

The Examiner erred in concluding that the subject matter of claim 10 would have been obvious over JP '979.

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ORDER

We affirm the Examiner's decision to reject claims 1-5, 8, 9, 11-23, 25-28, and 30.

We reverse the Examiner's decision to reject claims 10, 29, and 31.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. §1.136(a)(1)(v).

AFFIRMED-IN-PART

KMF

GOODWIN PROCTER LLP
Patent Administrator
53 State Street
Exchange Place
Boston, MA 02109-2881